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Examiner: Amaya, Carlos D.

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

**Listing of Claims:** 

Claim 1 (currently amended) An electronic switching module that can directly be

mounted instead of an of the electromagnetic DC relaysrelay used in various vehicles

without any modifications; which consists of; the electronic switching module

comprising a plastic casing (1) protecting said electronic switching module against the

external environmental conditions, an electronic circuit including a drive circuit (7); a

semiconductor switch in the form of discrete transistor (3); and a printed circuit card (4)

on which the electronic circuit elements are arranged; an aluminium aluminum block (2)

closing the periphery of the electronic circuit and preventing over-heating of the

electronic circuit, a semiconductor switching element transistor (3), a printed circuit card

(4) on which the electronic circuit elements are arranged, a cover (5) wherein said printed

circuit card (4) is placed and the contacts (6) that are mounted to the cover (5) to provide

the connection to the power circuit.

Claim 2 (currently amended) An The electronic switching module according to claim 1,

characterized with awherein the plastic casing (1) is provided with a row of perforations,

to allow heat transfer.

Claim 3 (currently amended) An The electronic switching module according to

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elaims claim 1 and 2, characterized with, wherein the aluminum block (2) is a prismatic

aluminium aluminum block-(2) with fins provided on it, in order to transfer to outside the

heat created in the circuit more rapidly.

Claim 4 (currently amended) An The electronic switching module according to

elaims claim 1 to 3, characterized with, wherein the contacts (6) are adapted to be placed

in the contact guides of the previously used electromagnetic relay, without requiring any

modifications.

Claim 5 (currently amended) An The electronic switching module according to

claims claim 1 to 4, characterized with an, wherein the electronic circuit consisting of a

comprises the drive circuit (7) comprising a triggering DC source (8); a resistance ( $R_{10}$ ), a

LO (14), a diode ( $Q_{10}$ ) and a second resistance ( $R_{11}$ ) all connected in series to said source

and a capacitor (C<sub>10</sub>) connected in parallel to all these, and a chassis (frame) (13); a

transistor (3) which is connected to the drive circuit (7) from its inlet (gate) end (9); a

resistance  $(R_{12})$ , the DC source (drain) (10) end of the transistor (3) of which is connected

to the source (11) end of the transistor; and a load  $(L_{10})$ .

Claim 6 (currently amended) An The electronic switching module according to

elaimsclaim 1 to 4, characterized with an, wherein the electronic circuit consisting of a

comprises the drive circuit (7) comprising a resistance (R20) connected in series to a

triggering DC source, a transistor (T<sub>20</sub>) and diode (Q<sub>20</sub>) connected to each other in

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parallel which are in turn connected to said resistance in series, a frame (13) connecting

them to the ground and a diode (Q<sub>21</sub>) connected in series to them; a diode (Q<sub>22</sub>), a

transistor (10) and a resistance (R<sub>21</sub>) connected to each other in parallel which are in turn

connected to said driving circuit (7) in series, a triggering DC source (8) feeding said

circuit and a diode (Q<sub>23</sub>) and a load (L<sub>20</sub>) connected to each other in parallel, which

connect them to the frame (13).

Claim 7 (currently amended) An The electronic switching module according to

elaimsclaim 1 to 4, characterized with an, wherein the electronic circuit consisting of

comprises a transistor (10) and two resistances (R<sub>31</sub>,R<sub>32</sub>) connected to each other in

parallel which are in turn connected to said resistance, and a frame (13) which connects

the above components to the ground.

Claim 8 (currently amended) An The electronic switching module according to

elaims claim 1 to 7, characterized with a, wherein the printed circuit card (4) comprising

comprises an electronic circuit wherein more than one LO and more than one

simultaneously operating transistor, are used in order to obtain higher current values in

the power circuit.

Claim 9 (currently amended) An The electronic switching module according to

elaimsclaim 1 to 8 characterized with an, wherein the electronic circuit comprising

comprises a single drive circuit including simultaneously operating LO's and more than

one power circuit activated by being connected in parallel, wherein said module is used

as a switch.

Claim 10 (currently amended) An electronic switching module characterized with an

electronic circuit comprising a resistance connected in parallel to the load existing the

transistor, wherein said module is used as a fuse by providing control on the current. that

can directly be mounted instead of an electromagnetic DC relay used in various vehicles;

the electronic switching module comprising a plastic casing (1) protecting said electronic

switching module against the external environmental conditions and wherein the plastic

casing (1) is provided with a row of perforations to allow heat transfer, an electronic

circuit including a drive circuit (7); a semiconductor switch in the form of discrete

transistor (3); and a printed circuit card (4) on which the electronic circuit elements are

arranged; an aluminum block (2) closing the periphery of the electronic circuit and

preventing over-heating of the electronic circuit, a cover (5) wherein said printed circuit

card (4) is placed and contacts (6) that are mounted to the cover (5) to provide the

connection to the power circuit.

Claim 11 (new) The electronic switching module according to claim 10, wherein the

aluminum block (2) is a prismatic aluminum block with fins provided on it, in order to

transfer to outside the heat created in the circuit more rapidly.

Claim 12 (new) The electronic switching module according to claim 10, wherein the

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contacts (6) are adapted to be placed in the contact guides of the previously used

electromagnetic relay, without requiring any modifications.

Claim 13 (new) The electronic switching module according to claim 10, wherein the

electronic circuit comprises the drive circuit (7) comprising a triggering DC source (8); a

resistance (R<sub>10</sub>), a LO (14), a diode (Q<sub>10</sub>) and a second resistance (R<sub>11</sub>) all connected in

series to said source and a capacitor (C<sub>10</sub>) connected in parallel to all these, and a chassis

(frame) (13); a transistor (3) which is connected to the drive circuit (7) from its inlet

(gate) end (9); a resistance (R<sub>12</sub>), the DC source (drain) (10) end of the transistor (3) of

which is connected to the source (11) end of the transistor; and a load  $(L_{10})$ .

Claim 14 (new) The electronic switching module according to claim 10, wherein the

electronic circuit comprises the drive circuit (7) comprising a resistance (R<sub>20</sub>) connected

in series to a triggering DC source, a transistor  $(T_{20})$  and diode  $(Q_{20})$  connected to each

other in parallel which are in turn connected to said resistance in series, a frame (13)

connecting them to the ground and a diode (Q21) connected in series to them; a diode

 $(O_{22})$ , a transistor (10) and a resistance  $(R_{21})$  connected to each other in parallel which are

in turn connected to said driving circuit (7) in series, a triggering DC source (8) feeding

said circuit and a diode (Q23) and a load (L20) connected to each other in parallel, which

connect them to the frame (13).

electronic circuit comprises a transistor (10) and two resistances (R<sub>31</sub>,R<sub>32</sub>) connected to

each other in parallel which are in turn connected to said resistance, and a frame (13)

which connects the above components to the ground.

Claim 16 (new) The electronic switching module according to claim 10, wherein the

printed circuit card (4) comprises an electronic circuit wherein more than one LO and

more than one simultaneously operating transistor, are used in order to obtain higher

current values in the power circuit.

Claim 17 (new) The electronic switching module according to claim 10, wherein the

electronic circuit comprises a single drive circuit including simultaneously operating

LO's and more than one power circuit activated by being connected in parallel, wherein

said module is used as a switch.

Claim 18 (new) An electronic switching module that can directly be mounted instead of

an electromagnetic DC relay used in various vehicles; the electronic switching module

comprising a plastic casing (1) protecting said electronic switching module against the

external environmental conditions and wherein the plastic casing (1) is provided with a

row of perforations to allow heat transfer, an electronic circuit including a drive circuit

(7): a semiconductor switch in the form of discrete transistor (3); and a printed circuit

card (4) on which the electronic circuit elements are arranged; an aluminum block (2)

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closing the periphery of the electronic circuit and preventing over-heating of the

electronic circuit and wherein the aluminum block (2) is a prismatic aluminum block

with fins provided on it, in order to transfer to outside the heat created in the circuit more

rapidly, a cover (5) wherein said printed circuit card (4) is placed and contacts (6) that are

mounted to the cover (5) to provide the connection to the power circuit.

Claim 19 (new) The electronic switching module according to claim 18, wherein the

contacts (6) are adapted to be placed in the contact guides of the previously used

electromagnetic relay, without requiring any modifications.

Claim 20 (new) The electronic switching module according to claim 18, wherein the

electronic circuit comprises the drive circuit (7) comprising a triggering DC source (8); a

resistance (R<sub>10</sub>), a LO (14), a diode (Q<sub>10</sub>) and a second resistance (R<sub>11</sub>) all connected in

series to said source and a capacitor (C<sub>10</sub>) connected in parallel to all these, and a chassis

(frame) (13); a transistor (3) which is connected to the drive circuit (7) from its inlet

(gate) end (9); a resistance ( $R_{12}$ ), the DC source (drain) (10) end of the transistor (3) of

which is connected to the source (11) end of the transistor; and a load  $(L_{10})$ .